

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

Advanced Television Systems
and their Impact Upon the
Existing Television
Broadcast Service

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MM Docket No. 87-268

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Comments
of the
New York Police Department
City of New York

THE NEW YORK POLICE DEPARTMENT (NYPD)

The NYPD is the largest municipal law enforcement agency in the United States responsible for the protection of life and property in the largest city in the nation. The department has recently received national recognition for one of the greatest reductions in crime in the history of our nation. There are over 32,000 sworn officers, 7,000 civilians and 2,000 traffic agents. The Communications Division handles over 10 million 9-1-1 calls for police, fire and emergency medical services and dispatches over 4.2 million radio runs annually for police services. Wireless communications has a critical role in the department's responsibility for protecting life and property. The NYPD presently has 24,000 portable, 1,000 mobile and 2,500 mobile data radios. The radio system is comprised of 100 channels; 68 voice channels, of which 34 are within UHF TV channel 15 (see Attachment A); and 32 data channels. The infrastructure includes 323 base station repeaters, 1,555

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satellite receivers, 100 emergency control stations, 68 dispatch positions and a six site digital microwave system. The radio system infrastructure is presently valued at over \$100 million and would cost approximately \$200 million to replace in today's economy.

The NYPD is divided into 76 precincts, 4 highway districts, 12 transit districts, 9 housing police service areas, emergency service units, mounted units, aviation units, harbor units and various uniformed task forces. In addition to these units the NYPD also has narcotics, organized crime, anti-terrorist and various other specialized task forces. The department also performs dignitary protection jointly with the United States Secret Service and has members actively assigned to all Federal Law Enforcement Agencies with offices in New York City.

The NYPD radio system is divided into 35 dispatch zones which typically include two to three precincts. In addition to the dispatch zones, the department has citywide clear and encrypted voice channels to support the various units that require specialized communications. The department also provides and supports interoperability channels for communications with other NYC agencies and adjoining jurisdictions. The radio system is presently undergoing major capital improvements (\$36 million) which upon completion will return the system to a state of good repair. In addition, the New York City Transit Authority is funding a \$130 million project which will provide for radio communications for the NYPD, New York City Fire Department, including its Bureau of Emergency Medical Service, as well as providing for interoperability communications among various other agencies throughout the New York City Transit System.

BACKGROUND

The New York Police Department (NYPD), hereafter referred to as the "NYPD", commends the Federal Communications Commission, hereafter referred to as the "Commission", on the extensive effort it has undertaken to address the Digital television issue. The NYPD recognizes the complexity of this task and fully supports the Commission's efforts to accommodate the development and implementation of DTV channels in a fair and equitable manner. Additionally, the NYPD fully supports the Commission's efforts to consolidate the present 400 MHZ of television spectrum into a more condensed core. To this end, the consolidation of television spectrum will enable the Commission to more easily implement the recommendations of the recently submitted Final Report of the Public Safety Wireless Advisory Committee.

We urge the Commission to adopt protection criteria similar to the rules which were adopted as part of FCC Docket 18261. Since the incumbent users are, in this case, in the Public Safety land mobile radio service, the criteria should protect these users from harmful interference from adjacent and/or co-channel DTV stations. We further propose that the Commission seriously reconsider the proposed assignment of DTV channel 16 in New Haven, Connecticut and DTV channel 15 in Providence, Rhode Island in light of the negative impact this assignment will have upon the land mobile radio users licensed to operate within UHF TV channel 15 in the New York City metropolitan area.

NYPD land mobile radio stations operate in the public interest using public funding. In carrying out its responsibility to implement the public interest, the Commission should not adopt policies and channel assignments that serve the interests of the broadcast industry, a "for profit" entity, at the expense of incumbent Public Safety licensees. Under the FCC Docket 18261, which authorized land mobile use of UHF TV channels 14 through 20, New York City and Northeastern New Jersey were authorized use of UHF TV channels 14 (470-476 MHz) and 15 (476-482 MHz). Substantial public resources have been committed pursuant to this authorization. As an authorized licensee, the NYPD believes that the Commission must protect the incumbent license, especially the Public Safety agencies who will surely be impacted, negatively and substantially, as proposed by the DTV assignments made under the pending FCC Docket No. 87-268, The Sixth Further Notice of Proposed Rule Making.

The Commission recognized the needs of the Public Safety community when it approved Docket 18261 granting sharing of UHF TV channels in the top urban areas of the United States. In doing so the Commission also recognized the vital role that reliable and interference free communications has in Public Safety's critical mission of protecting life and property. This was in response to the growing need for additional spectrum to meet the communications requirements of Public Safety. These channels are presently in use throughout the United States and for the most part constitute an extremely large base of installed infrastructure. This infrastructure has been developed over the 25 years since the TV sharing agreement was signed, at a significant expense to these municipalities and ultimately the taxpayer.¹

¹ See 47 CFR §2.106, Notes NG66, NG114 and NG127. There are 13 urbanized areas where channels may be used for land mobile operations: New York-Northern New Jersey; Los Angeles; Chicago-Northwestern Indiana; Philadelphia, PA-New Jersey; Detroit; San Francisco-Oakland, CA; Boston, MA; Washington, DC- Maryland- Virginia; Pittsburgh, PA; Cleveland, OH; Miami, FL; Houston, TX; Dallas, TX.

The concerns of the NYPD focus on the harmful interference which will be caused by the co-channel assignment of DTV channel 15 to Providence, Rhode Island and the adjacent channel assignment of DTV channel 16 in New Haven, Connecticut as proposed in MM Docket No. 87-268. These assignments are immediate threats to existing, licensed NYPD land mobile users of UHF television channel 15 frequencies (476-482 MHz). These users operate within the fifty (50) mile radius as referenced in 47 CFR Part 90 Subpart L, Authorization in the Band 470-512 MHz (UHF-TV Sharing). The following page contains a list of frequencies presently used by the NYPD for Public Safety land mobile radio communications.

**UHF-TV Sharing Base Station Frequencies
476-482 MHz - TV Channel 15**

476/479.3125	476/479.3375
476/479.3625	476/479.3875
476/479.4125	476/479.4375
476/479.4625	476/479.4875
476/479.5125	476/479.5375
476/479.5625	476/476.5875
476/479.6125	476/479.6375
476/479.6625	476/479.6875
476/479.7125	476/479.7375
476/476.7625	476/479.7875
476/479.8125	476/479.8375
476/479.8625	476/479.8875
476/479.9125	476/479.9375
476/479.9625	476/479.9875
477/480.0125	477/480.0375
477/480.0625	477/480.0875
477/480.1125	477/480.1375

Total number of Channel 15 Frequencies = 34

Current rules permit frequencies in the UHF TV channel 14 and 15 bands to be available for assignment in areas within 50 miles of the geographical center of the New York/North East New Jersey area as referenced in FCC Rules and Regulations, Part 90, section 90.303 and 90.305. Mobile units and control stations may be operated within 48 km. (30 mi.) of their associated base stations. The above parameters give a potential area of mobile operation that is 128 km. (80 mi.) from the geographical center of the NYC urbanized area.

Sections 90.307 and 90.309 of the FCC Rules and Regulations, Part 90, provide the criteria and tables for antenna height and geographical separation distances in order to determine ERP limits for land mobile radio (LMR) stations. The channel assignment criteria, in NYC, is based on 40 dB protection of the television service. The geographical separation from the center of the NYC Urbanized Area to the New Haven, CT transmitter site is 71.48 miles (115.03 Km) in the direction of 49.5 degrees azimuth. The geographical separation from the center of the NYC Urbanized Area to the Providence, RI transmitter site is 160.43 miles (258.18 Km) in the direction of 61.3 degrees azimuth.

According to 90.307 (d), the minimum distance between a land mobile base station which has associated mobile units and a protected adjacent channel television station is 90 miles (145 Km). In reality, the existing licensed systems and the users in UHF channel 15 band are less than 90 miles from the New Haven, CT site and in most cases less than 60 miles. These same users are also within approximately 120 miles from the proposed Providence, RI DTV transmitter site. The current proposal before the Commission places the incumbent licensees in violation of the protection criteria as defined in FCC 18261.

COMMENTS

In the Second and Sixth Further Notices, hereafter referred to as "Notice(s)", the Commission proposes to use the same criteria for protection that currently exists between NTSC stations and land mobile radio. The proposed allocation of DTV channel 16 in New Haven, CT places the incumbent LMR licensees in violation of the current FCC Rules and Regulations (§90.307(d)). This criteria was intended to protect NTSC licensees from harmful interference from land mobile. Given that the UHF TV sharing agreement grants the land mobile users permanent licenses on channels 14 - 20 the Commission should adopt protection criteria that protects the incumbent land mobile users. Subpart L of the Commission's regulations provide for protection criteria which protect broadcast television stations in the 470-512 MHz range from interference from land mobile licensees. If the 470-512 MHz band is truly a shared band, land mobile users, particularly Public Safety users, should be afforded the same protection criteria as television broadcast stations.

The Commission further proposes that in some instances it may be necessary to allot DTV channels well within the adjacent or co-channel spacings. In these cases, the Commission must consider the permanent status of the incumbent licensees and strictly adhere to a protection criteria that protects the incumbent land mobile users. Even the Commission's consideration of short spacing between DTV and land mobile radio makes the argument for a protection criteria more viable. The NYPD recommends that the Commission require a new DTV station to identify potential interference to incumbent land mobile users. If the potential for interference exists, the Commission must require the new DTV station to employ adequate filtering or other necessary precautions to prevent disruption of the Public Safety communications infrastructure.

The Notices also indicate that DTV stations will be allowed to increase the transmitter output to duplicate their present coverage in anticipation of the differences between an NTSC signal and a DTV signal and the frequency propagation characteristics of the new DTV channel. The use of television DTV channel 16 in New Haven Connecticut, at a power level in excess of one million watts, will have a significant impact on existing UHF TV Channel 15 (476-482 MHz) Public Safety users in the New York metropolitan area. DTV channel 15 in Providence, RI, with a proposed power level in excess of 1.7 megawatts, will also adversely impact these same users.

The NYPD recommends that the Commission adopt a criteria² similar to that which protects the NTSC licensees from interference from land mobile radio to protect the incumbent licensees from harmful interference from the DTV licensee. The incumbent users, as permanent licensees who have made substantial capital investments, all from public resources, should not encounter a DTV station operating within the co-channel or adjacent channel limitations. The NYPD further requests that the proposed allocation of DTV channel 16 in New Haven, CT and DTV channel 15 in Providence, RI be disallowed on the basis that it will cause harmful interference to land mobile radio users in the New York metropolitan area.

The Commission further proposes that it may be necessary to impose additional conditions in those cases where the spacing cannot be met. Although these intentions are sincere, the imposition of additional conditions for short spacing will not eliminate the harmful interference that the operation of a DTV channel in New Haven will cause to the Public Safety land mobile users on UHF TV channel 15 in the New York City. For these reasons alone the Commission should not

² FCC Part 90, Subpart L

allocate DTV channel 16 in New Haven, CT and DTV channel 15 in Providence, RI. In addition, the assignment of DTV channel 15 in Rhode Island, even though Providence is outside of the proposed 155 mile limitation, will also impact land mobile UHF TV channel 15 operation in New York City. This is due to the proposed increase in ERP allowed by the Notice to overcome coverage deficiencies. Land mobile radio users in New York City, for the most part, are separated from New Haven and Providence by the Long Island Sound. In effect, this creates a virtual duct or waveguide by which the DTV signal will propagate. Normal protection criteria for land mobile radio cannot be considered typical in this instance and, therefore, short spacing will not be acceptable.

CONCLUSION

The NYPD supports the Commission's efforts regarding this Docket. However, since Public Safety land mobile radio operations are publicly funded, it is reasonable to expect the Commission to protect the existing Public Safety LMR users licensed by the FCC on UHF TV channel 15 from harmful interference. The Commission should seriously reconsider the proposed assignment of DTV channel 16 to New Haven, Connecticut and DTV channel 15 to Providence, Rhode Island in light of the negative impact this assignment would have upon incumbent UHF TV channel 15 Public Safety land mobile licensees in the New York City metropolitan area.

The NYPD is a member agency of the New York Metropolitan Advisory Committee (NYMAC) which has submitted comments under separate cover. As a member of this Committee which is recognized by the Commission, the NYPD participated in the writing of NYMAC's comments and urges the Commission to adopt the recommendations set forth in those comments.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Michael Amarosa", written in a cursive style.

Michael Amarosa
Deputy Commissioner
New York Police Department
City of New York

November 21, 1996